

Attorney Docket No. LEAP:101_US_
U.S. Patent Application No. 09/821,578
Reply to Office Action of May 7, 2004
Date: September 7, 2004

Remarks

The § 103 (a) Rejections of Claims 1-11 and 14-21

The Examiner has rejected Claims 1-11 and 14-21 as unpatentable under 35 U.S.C. §103 (a) over United States Patent No. 5,376,007 to Zirm (“Zirm” or “the Zirm patent”) in view of United States Patent No. 6,476,858 to Ramirez Diaz, et al. (“Diaz” or “the Diaz patent”), United States Patent No. 4,202,037 to Glaser, et al. (“Glaser” or “the Glaser patent”) and the publication “General Presentation, Training, and Collaborative Planning” (“Pointmaker”). Applicant respectively traverses these rejections and requests reconsideration.

The Examiner states that Zirm does not teach a multiplexed control means as is claimed in independent Claim 1 of the instant application. For the record, Applicant respectfully traverses the Examiner’s statement that Zirm was acting as his own lexicographer in using the phrase “video distributor” to teach a video multiplexer. Applicant respectfully notes that Zirm specifically describes the use of a digital multiplexer as a “measurement data accumulation component” clearly indicating the inventor in the Zirm patent possessed knowledge of multiplexers and their function and thus differentiated between the video distributor and a multiplexer.

Applicant respectfully traverses the Examiner’s statement that it would have been obvious to combine the multiple microscope display system of Zirm with the video multiplexer disclosed in the Diaz patent. To establish a *prima facie* case of obviousness, there must be some suggestion or motivation to modify the reference. Furthermore, this suggestion must be found in analogous art. MPEP § 2141 (a). The Diaz patent discloses the use of a multiplexer to receive a plurality of signals from a plurality of surveillance cameras. Nowhere in the Diaz patent is there mentioned the use of a multiplexer to receive a plurality of signals from a group of microscopes in an instructional setting. Applicant courteously submits that a person skilled in the microscopy laboratory instruction arts would not look to the surveillance and security arts to display microscope images. On this initial basis, Applicant respectfully requests reconsideration and passage to allowance of Claim 1.

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Applicant respectfully traverses the Examiner's statement that the Glaser patent teaches "annotating said instruction image in real time." Applicant courteously notes that the Glaser patent is used to allow the observer using the microscope to input instructions without moving his/her eyes. Specifically, the stylus in Glaser is employed to place images stored in a computer memory onto a microscope field of view and to transfer a stage movement instructional template stored in a computer memory from an integrated computer to the microscope. (See Glaser col. 2, line 65-col. 3, line 8.) Applicant respectfully points out that the graphic display 19 in Glaser displays only data and images stored in the attached computer 17. A camera lucida or optical beam splitter 20 receives the image on the graphics display and superimposes the graphic display image on the microscope field of view (Glaser col. 4, lines 33-42). Unlike the invention claimed in Claim 1, in Glaser the image on the graphics display is input onto the microscope field of view. The stylus is used only to input commands to the computer to control the microscope or manipulate the field of view in the microscope. See Glaser col. 4, lines 50-57 stating, "By manipulating the stylus and activating its switch 23 (shown in FIG. 5a) – or alternatively manipulating the stylus and activating a foot switch 24 (shown in FIG. 5b) – the operator may selectively enter data into the computer's memory, retrieve data, investigate other areas of the slide, and otherwise exert complete control over the microscope and the computer." In contrast to Applicant's Claim 1, no where in Glaser is there the suggestion or teaching of any transmission of an annotated image or of a separate annotation from the microscope that is to be displayed on the graphics display, let alone its transmission via a video multiplexer to a graphics display,. Consequently, the stylus as disclosed in the Glaser patent is a device used only to input data onto the microscope field of view or to input stage movement or other types of instructions to the microscope. Neither of these functions includes the transmission of the instant image in the microscope field of view to a graphics display device as is claimed in Claim 1. For this reason, the Glaser patent fails as a reference under § 103 (a) as it fails to teach, disclose, or suggest the use of a display marker means to annotate a graphics display connected to a multiplexer as claimed in Claim 1. On this second basis, Applicant respectfully requests reconsideration and passage to allowance of Claim 1.

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The Examiner states that the Pointmaker reference teaches a display means, specifically a touch screen display means like Applicant's. Applicant courteously points out that Claim 1 claims a display means, not specifically a touch screen display means. Applicant also notes that the Pointmaker reference fails to disclose any use of a video multiplexer or the use of the Pointmaker device with any type of plurality of instruction images let alone a plurality of microscope images. The Pointmaker reference only shows the use of a stylus or pointer directly connected to a single display means. In addition, Applicant traverses the Examiner's statement that it would have been obvious to one of ordinary skill in the art to use a touch screen as taught by Pointmaker in Zirm because Glaser illustrated it was well known to use a pointing device to control and annotate an image provided by a microscope. As noted above, Glaser discloses only the use of a stylus to input stored instructions and images from a computer to the microscope field of view. Manipulation of a microscope image in a microscope field of view is not what is claimed in Claim 1. Applicant has pointed out above that while Claim 1 claims a display means that displays an instruction image comprising student field of view images, Glaser does not teach the projection or other transmission of an annotated microscope image to a display means. Consequently, a person of ordinary skill in the art would not look to Glaser suggest the use of the Pointmaker device to solve the problem of annotating a plurality of microscope images onto a display means because Glaser does not teach, disclose or suggest such an activity.

In summary, Applicant traverses the rejection of Claim 1 as obvious under § 103 (a) over Zirm in view of Diaz, Glaser and Pointmaker. In order to establish a *prima facie* case of obviousness, there must be some suggestion to combine the references to teach all the elements of the rejected claim. Moreover, those references must come from analogous art. Applicant respectfully submits that the use of a video multiplexer as suggested by Diaz is not a use found in analogous art. As noted above, Diaz pertains to surveillance and security. No where in Diaz is there mentioned the use of a video multiplexer for the integration of microscope images or any other academic purpose. The Examiner has stated that Zirm fails to teach a video multiplexer as is claimed in Applicant's Claim 1. Neither Glaser nor Pointmaker discuss the use of any type of multiplexer, let alone input from a stylus or other display marker means into a video multiplexer

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as claimed in Claim 1. In addition, Glaser fails to suggest the use of the Pointmaker device or other type of stylus to annotate any type of graphics display as the stylus in Glaser is used only to input stored computer data and images onto a microscope field of view. Therefore, Applicant respectfully submits that the examiner has not established a *prima facie* case of obviousness and requests reconsideration and passage to allowance of Claim 1.

“If an independent claim is nonobvious under 35 U.S.C. § 103, then any claim depending therefrom is nonobvious.” *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). Claims 2-11 and 14-21 depend directly or indirectly from Claim 1 and thus incorporate all the elements of that claim. As discussed above, Claim 1 is nonobvious under § 103 (a) over Zirm in view of Diaz, Glaser and Pointmaker. Thus, dependent Claims 2-11 and 14-21 are also nonobvious over the same references. Applicant respectfully requests reconsideration and passage to allowance of those claims.

In addition, Applicant specifically traverses the rejection under § 103 (a) of Claim 2 and the claims that depend from Claim 2. In contrast to the Examiner’ statement, Applicant respectfully points out that Zirm does not teach an instructor microscope or other instructor instrument connected to the video distributor. Applicant courteously notes that both Figures 1 and 2 in Zirm depict the instructor microscope – camera combination (14, 15, and 36) is connected directly to the display 18 not the video distributor 17 as stated by the Examiner. (See also, Zirm Col. 4, lines 9-16.) No where in the text of the Zirm patent is there discussed or disclosed the connection of an instructor image or signal to a video distributor or video multiplexer.

Applicant respectfully points out that Diaz also fails to disclose operator (or instructor) input into the disclosed multiplexer in the form of an image that is to be displayed. For these additional reasons, Applicant respectfully submits that the combined references of Zirm, Diaz, Glaser and Pointmaker fail to establish a *prima facie* case of obviousness under § 103 (a) to render Claim 2 obvious. On these additional grounds, Applicant respectfully requests reconsideration and passage to allowance of Claim 2.

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Claims 4, 6, 8, 10, 11, 15, 17, and 19 depend directly or indirectly from Claim 2 and thus incorporate all the elements of that claim. Because, as discussed above, Claim 2 is nonobviousness under § 103 (a) over Zirm in view of Diaz, Glaser and Pointmaker, dependent Claims 4, 6, 8, 10, 11, 15, 17, and 19 are also nonobvious over the same references. Applicant respectfully requests reconsideration and passage to allowance of those claims.

Respectfully, Applicant also specifically traverses the rejection of Claim 11 under § 103 (a) as obvious over Zirm in view of Diaz, Glaser and Pointmaker. Claim 11 claims the invention in which the image signal from the instructor microscope is selected as the selected set using the multiplexed control means. For the claimed selection of the instructor image signal by the multiplexer to occur, the instructor microscope and associated camera must be connected to the multiplexer means. In contrast, as noted above and as seen in Figures 1 and 2 of Zirm, conductor 24 conducts the image signal from the instructor microscope directly to the display monitors, bypassing the video distributor 17. No where in Zirm is there disclosed the connection of an instructor signal of any sort to a video distributor. Also, as noted above, there is no suggestion in Diaz to provide operator or instructor input in the of an image to be displayed into the security multiplexer disclosed in that patent. In addition, as discussed above, neither Glaser nor Pointmaker discloses the use of a video multiplexer to select an instruction image for display from a variety of images input into a multiplexer. In fact, Glaser does not suggest or teach the use of any image from a microscope to be displayed on a display means. For these reasons, Applicant respectfully submits that Claim 11 is nonobvious under § 103 (a) over Zirm in view of Diaz, Glaser and Pointmaker and courteously requests reconsideration and passage to allowance of Claim 11.

Similarly, Applicant respectfully traverses the rejection of Claims 14 and 15 under § 103 (a) as obvious over Zirm in view of Diaz, Glaser and Pointmaker. Claims 14 and 15 claim the inventions in which the instruction image and student view images are stored in and retrieved from a computer memory. The invention of Claim 15 also claims the invention where the instructor view image is stored and retrieved from a computer memory. The Examiner states that computer 35 in Figure 2 discloses the storage of student and instructor view images. Applicant

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traverses this statement and courteously points out that, in Zirm, only the pressure readings from student microscopes are conducted to a digital multiplexer to be stored in a computer. Applicant respectfully notes that in Zirm student view images are conducted to a video distributor and from there to a multimonitor display. No student images or instructor images can be stored in computer 35 of Figure 2 as in that embodiment, no image views are conducted directly or indirectly to the computer. Further, no where in Zirm is there discussed the storage in computer memory of student or instructor images in a computer. For this reason, Applicant respectfully traverses the rejection of Claims 14 and 15 and requests reconsideration and passage to allowance of those claims.

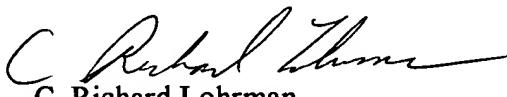
Applicant respectfully traverses the rejection of Claims 19 under § 103 (a) as obvious over Zirm in view of Diaz, Glaser and Pointmaker. As noted above, neither Zirm nor Diaz teaches input of an instructor-generated or operator-generated image into a multiplexer means from an instructor or multiplexer operator. For this reason, Zirm cannot teach or suggest the magnification of an instructor image comprising an image signal from an instructor transmitted by way of a multiplexer means. For this reason, Applicant respectfully traverses the rejection of Claim 19 and requests reconsideration and passage to allowance of that claim.

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Conclusion

Applicant respectfully submits that the present application is now in condition for allowance, which action is courteously requested. The Examiner is invited and encouraged to contact the undersigned attorney of record if such contact will facilitate an efficient examination and allowance of the application.

Respectfully submitted,



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